

**1 Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Trade name: OXALACETIC ACID ≥98 %, for biochemistry

Article number: 4032

CAS Number:

328-42-7

EC number:

206-329-8

**Registration number**

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation**

Laboratory chemical

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Carl Roth GmbH + Co. KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

E-Mail: [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)**Further information obtainable from:** Department Health, Safety and Environment**1.4 Emergency telephone number:**

Poison Centre Munich

Telefon +49/(0)89 19240

**2 Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

C; Corrosive

R34: Causes burns.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS05

**Signal word** Danger

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**Hazard statements**

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

**Additional information:**

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**2.3 Other hazards**

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

### 3 Composition/information on ingredients

**3.1 Chemical characterization: Substances****CAS No. Description**

328-42-7 oxalacetic acid

**Identification number(s)****EC number:** 206-329-8**Formula:** C<sub>4</sub>H<sub>4</sub>O<sub>5</sub>**Molar mass [g/mol]:** 132,07

### 4 First aid measures

**4.1 Description of first aid measures****General information:**

Remove any clothing soiled by the product.

**After inhalation:**

Supply fresh air; if there is any trouble seek medical help.

**After skin contact:**

Immediately rinse with water.

Seek medical treatment.

**After eye contact:**

Rinse immediately for 15 minutes with plenty of water with the eyelid held wide open. Seek medical advice.

**After swallowing:**

Rinse out mouth and drink a glass of water. Do not induce vomiting.

Call for a doctor immediately and show the container or label.

**4.2 Most important symptoms and effects, both acute and delayed**

Irritation and corrosion

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**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**5 Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**Use fire extinguishing methods suitable to surrounding conditions.  
Water, CO<sub>2</sub>, powder, foam.**For safety reasons unsuitable extinguishing agents:**

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**In case of fire, the following can be released:In the event of fire development of hazardous combustion gases or vapours possible.  
Carbon monoxide and carbon dioxide**5.3 Advice for firefighters****Protective equipment:**Wear self-contained respiratory protective device.  
Wear fully protective suit.**6 Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Avoid formation of dust.**6.2 Environmental precautions**

Do not allow to enter sewers/ground water or penetrate the soil.

**6.3 Methods and material for containment and cleaning up**Pick up mechanically.  
Dispose of the material collected according to regulations.  
Use neutralizing agent.  
Ensure adequate ventilation.**6.4 Reference to other sections**See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.**7 Handling and storage****7.1 Precautions for safe handling**Handling corresponding to laboratory safety guidelines.  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.**Information about fire - and explosion protection:**

Keep respiratory protective device available.

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## 7.2 Conditions for safe storage, including any incompatibilities

### Storage:

#### **Requirements to be met by storerooms and receptacles:**

No special requirements.

#### **Information about storage in one common storage facility:**

Store away from foodstuffs.

#### **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

#### **Recommended storage temperature: -20 °C**

## 7.3 Specific end use(s)

No further relevant information available.

## 8 Exposure controls/personal protection

### **Additional information about design of technical facilities:**

No further data; see item 7.

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:** Not required.

### **Additional information:**

The lists valid during the making were used as basis.

### 8.2 Exposure controls

#### Personal protective equipment:

#### **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

#### **Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### **Respiratory protection:**



Required when dusts are generated: filter P1.

#### **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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**Material of gloves**

Nitrile, thickness: ≥ 0.11 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

Value for the permeation: Level ≥ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, thickness: ≥ 0.11 mm

Value for the permeation: Level ≥ 6

**Eye protection:**

Tightly sealed goggles

**Body protection:**

Acid resistant protective clothing

## 9 Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Crystalline powder
<b>Colour:</b>	Whitish
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

<b>pH-value (50 g/l) at 20 °C:</b>	1-2
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**Change in condition**

<b>Melting point/Melting range:</b>	165 °C (dec.)
<b>Boiling point/Boiling range:</b>	Undetermined.

<b>Flash point:</b>	174 °C
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<b>Flammability (solid, gaseous):</b>	Not determined.
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<b>Ignition temperature:</b>	174 °C
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<b>Decomposition temperature:</b>	Not determined.
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<b>Self-igniting:</b>	Not determined.
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<b>Danger of explosion:</b>	Product does not present an explosion hazard.
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**Explosion limits:**

<b>Lower:</b>	Not determined. No information available.
<b>Upper:</b>	Not determined. No information available.

**Oxidizing properties:**

No information available.

**Vapour pressure:**

Not applicable.

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<b>Density at 20 °C:</b>	0.33 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with water:</b>	Soluble.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

### 10.1 Reactivity

No information available

### 10.2 Chemical stability

#### Thermal decomposition / conditions to be avoided:

Exposure to light and oxygen.

No decomposition if used and stored according to specifications.

### 10.3 Possibility of hazardous reactions

Strong reaction possible with:

Strong oxidizing agents

Strong bases

Strong acids

### 10.4 Conditions to avoid

Strong Heating. (decomposition)

### 10.5 Incompatible materials:

No information available.

### 10.6 Hazardous decomposition products:

No information available.

In case of fire: see item 5.

## 11 Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity:

#### **LD/LC50 values relevant for classification:**

Quantitative data on the toxicity of this product are not available.

#### Primary irritant effect:

##### **on the skin:**

Caustic effect on skin and mucous membranes.

##### **on the eye:**

Strong caustic effect.

##### **after inhalation:**

No information available.

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**Sensitization:**

No sensitizing effects known.

**CMR effects:****Germ cell mutagenicity:**

No information available.

**Carcinogenicity:**

No information available.

**Reproductive toxicity:**

No information available.

**Aspiration hazard:**

No information available.

**Specific target organ toxicity - single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Specific target organ toxicity - repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Additional toxicological information:**

After swallowing: burns in the mouth, throat, oesophagus and gastrointestinal tract, risk of perforation in the oesophagus and gastrointestinal tract.

**Further information:**

The product should be handled with the care usual when dealing with chemicals.

**12 Ecological information****12.1 Toxicity****Aquatic toxicity:**

Quantitative data on the ecological effect of this product are not available.

**12.2 Persistence and degradability**

No further relevant information available.

**12.3 Bioaccumulative potential**

No further relevant information available.

**12.4 Mobility in soil**

No further relevant information available.

**Ecotoxicological effects:****Remark:**

Do not allow to enter waters, waste water, or soil!

Must not reach sewage water or drainage ditch undiluted or unneutralized.

**Additional ecological information:****General notes:**

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects**

No further relevant information available.

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### 13 Disposal considerations

#### Waste treatment methods

##### Recommendation

This material and its container must be disposed of as hazardous waste.  
The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

#### Uncleaned packaging:

##### Recommendation:

Disposal according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

#### 14.1 UN-Number

ADR, IMDG, IATA UN3261

#### 14.2 UN proper shipping name

ADR 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (oxalacetic acid)  
IMDG, IATA CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (oxalacetic acid)

#### 14.3 Transport hazard class(es)

ADR, IMDG, IATA



Class 8 Corrosive substances.  
Label 8

#### 14.4 Packing group

ADR, IMDG, IATA III

#### 14.5 Environmental hazards:

Marine pollutant: No

#### 14.6 Special precautions for user

Warning: Corrosive substances.  
Danger code (Kemler): 80  
EMS Number: F-A,S-B

#### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

#### Transport/Additional information:

ADR  
Limited quantities (LQ) 5 kg  
Transport category 3  
Tunnel restriction code E

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**UN "Model Regulation":**

 UN3261, CORROSIVE SOLID, ACIDIC, ORGANIC,  
N.O.S. (oxalacetic acid), 8, III

### 15 Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**National regulations:**
**Information about limitation of use:** Employment restrictions concerning juveniles must be observed.

**Waterhazard class:**

Water hazard class 2 (Self-assessment): hazardous for water.

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:** Department: Health, Safety and Environment

**Contact:** Herr Heine

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LD50\*: Lethal Dose, 50 percent (Not relevant for classification)

LD50\*: Lethal Concentration, 50 percent (Not relevant for classification)

 \* **Data compared to the previous version altered.**